

August 28, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H1102

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 8/18/2019 10:40:00AM for the analyses presented in the following report as Work Order 19H1102.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager

WORK ORDER SAMPLE SUMMARY**Date:** *Wednesday, August 28, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H1102

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1102-01	Outfall 001		08/18/2019 07:05	8/18/2019 9:45:00AM
19H1102-02	Outfall 011		08/18/2019 06:35	8/18/2019 9:45:00AM
19H1102-03	Outfall 002		08/18/2019 08:15	8/18/2019 9:45:00AM

CASE NARRATIVE**Date:** *Wednesday, August 28, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H1102

Samples in this work order are logged in per the COC submitted. The composite samples that were submitted NH₄, TSS, Phenol, Cn, Pb and Zn should have a collection date of 8/17/19. The Grab samples Oil & Grease and Chlorine are the correct date listed 8/18/19. A Revised report has been issued to include this information.

Report has been revised to include Pb, Zn and Free Cn for Outfall 011 and Free Cn for 00. 8/28/19

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1102-01
Client Project:	NPDES Parameters	Sampled:	08/18/2019 7:05
Client Sample ID:	Outfall 001	Received:	08/18/2019 9:45
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analized	
			Method: EPA 200.7 Rev 4.4				Analyst: BTM			
Total Recoverable Metals by ICP										
Prep Date/Time: 08/18/2019 11:30										
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/18/2019 14:12	
Zinc	ejj	A	0.011	0.0073	0.020		mg/L	1	08/18/2019 14:12	
			Method: EPA 1664B				Analyst: KMT			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 08/18/2019 10:09										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/18/2019 14:12	
			Method: SM 4500-CN C/E-1999				Analyst: EF			
Total Cyanide										
Prep Date/Time: 08/18/2019 11:16										
Cyanide, Total	ejj	A	0.0042	0.0020	0.0050		mg/L	1	08/18/2019 13:56	
			Method: SW-846 9014				Analyst: AJR			
Free Cyanide										
Prep Date/Time: 08/27/2019 12:44										
Free Cyanide		A	ND		0.0062		mg/L	1	08/27/2019 13:11	
			Method: EPA 350.1 Rev 2.0				Analyst: lachat3			
Nitrogen, Ammonia as N										
Prep Date/Time: 08/18/2019 11:37										
Nitrogen, Ammonia (As N)	ei	A	0.48	0.054	0.10		mg/L	1	08/18/2019 12:18	
			Method: EPA 420.4 Rev 1.0				Analyst: AJR			
Total Phenolics										
Prep Date/Time: 08/18/2019 11:56										
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/18/2019 13:41	
			Method: SM 2540 D-1997				Analyst: KMT			
Total Suspended Solids										
Prep Date/Time: 08/18/2019 10:47										
Total Suspended Solids	ejj	A	2.1	1.0	1.0		mg/L	1	08/18/2019 12:45	

Analytical Results

Date: *Wednesday, August 28, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1102-02
Client Project:	NPDES Parameters	Sampled:	08/18/2019 6:35
Client Sample ID:	Outfall 011	Received:	08/18/2019 9:45
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP									
Prep Date/Time: 08/20/2019 14:18									
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/20/2019 22:58
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	08/20/2019 22:58
			Method: EPA 1664B			Analyst: KMT			
Oil & Grease (HEM) by SPE									
Prep Date/Time: 08/18/2019 10:09									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/18/2019 14:12
			Method: SM 4500-CN C/E-1999			Analyst: EF			
Total Cyanide									
Prep Date/Time: 08/18/2019 11:16									
Cyanide, Total	ejj	A	0.0067	0.0020	0.0050		mg/L	1	08/18/2019 13:34
			Method: SW-846 9014			Analyst: AJR			
Free Cyanide									
Prep Date/Time: 08/27/2019 12:44									
Free Cyanide		A	0.0076		0.0062		mg/L	1	08/27/2019 13:13
			Method: EPA 350.1 Rev 2.0			Analyst: lachat3			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/18/2019 11:37									
Nitrogen, Ammonia (As N)	ei	A	0.39	0.054	0.10		mg/L	1	08/18/2019 12:26
			Method: EPA 420.4 Rev 1.0			Analyst: AJR			
Total Phenolics									
Prep Date/Time: 08/18/2019 11:56									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/18/2019 13:39
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/18/2019 10:47									
Total Suspended Solids	ejj	A	3.1	1.0	1.0		mg/L	1	08/18/2019 12:45

Analytical Results

Date: Wednesday, August 28, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1102-03
Client Project:	NPDES Parameters	Sampled:	08/18/2019 8:15
Client Sample ID:	Outfall 002	Received:	08/18/2019 9:45
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 1664B					Analyst: KMT				
Oil & Grease (HEM) by SPE									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/18/2019 14:12

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)

**Revised**
8/28/2019

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 0.6°C
 MICROBAC®

Revised
8/28/2019

Comments

Unable to analyze CN on 002 due to only receiving 2
H2SO4 preserved containers

Cooler Inspection Checklist

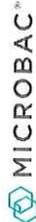
Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	No
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

Microbac Laboratories, Inc.

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com

RUSH!

CHAIN OF CUSTODY RECORD



Number **152330**
Instructions on back

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C) **1.04**
Therm ID **2060**
Holding Time
Samples Received on Ice? Yes No N/A
Custody Seals Intact? Yes No N/A

Turnaround Time

Routine (5 to 7 business days)
 RUSH* (notify lab)

(needed by)
Report Type
 Results Only Level 1 Level 2 Level 3 Level 4 EDD

Invoice Address

Client Name:
Address:
City, State, Zip:
Contact:
Telephone No.:

Lab Report Address

Client Name:
Address:
City, State, Zip:
Contact:
Telephone No.:

Send Report via: Mail Fax e-mail (address)

Send Invoice via: Mail Fax e-mail (address)

Project: Location: PO No.: Compliance Monitoring? Yes No
 Agency/Program

Sampled by (PRINT): Warren Hand Sampler Signature: [Signature] Sampler Phone No.:

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)
** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Grab / Comp	Preservative Types **	Analysis	Additional Notes						
001	8/18/19	07:05	65	9/6		Ammonia	TSS	Phenol	NA	NA	PH	total P	19H1102-01
011	8/18/19	06:35	65	9/6									02
002	8/18/19	08:15	2	9/6									03

Possible Hazard Identification Hazardous Non-Hazardous Radioactive Sample Disposition Dispose as appropriate Return Archive

Comments

Relinquished By (signature) [Signature] Date/Time 8/18/19 0900 Received By (signature) Dawn Farnsworth Date/Time 8/18/19 0900

Relinquished By (signature) [Signature] Date/Time 8/18/19 1046 Received By (signature) Nicole Reynolds Date/Time 8/18/19 1040